

## Candidate 1

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1a)	
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Aluminium front wheels are suitable	
because they are strong enough to	
hold the weight of the user.	
• ABS adjustable footrest is suitable	
because it's easy to clean.	
• The carbon fibre back wheels	
are suitable because they are	
durable and hard wearing.	
• The tubular aluminium frame is	
suitable because it won't rust and	
is scratch resistant.	
• The stainless steel bumper and	
wings are suitable they provide	
support to the wheels and	
aesthetically make it look better.	
• The nylon collapsible seat is	
suitable because it can be easily	
stored away and is a waterproof	
material.	

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b).	<p>Injection moulding could have been <sup>used</sup> for the adjustable footrests to provide the detail. This is suitable because it provides grip for the users feet, so their feet don't slide off the footrests.</p> <p>Extrusion could have been used for the tubular <del>aluminium</del> aluminium frame because there is a long continuous cross section. This process is suitable because it's fast and efficient, meaning it saves time. Also it would appear that it's relatively cheap.</p> <p>Mass production could have been used for the wheels on the sports wheelchair because it's such a big shape and many could be produced at the same time.</p>

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	<p>This is suitable because many can be produced at the same time and can financially save money, large quantities are needed.</p> <p>c) function has influenced the design of these wheelchairs;</p> <ul style="list-style-type: none"><li>• Must be able to hold the user without causing any issues.</li><li>• The wheelchairs must be easy to move without causing strain to the arms or any other part of the body.</li><li>• The collapsible wheelchair must be easy to store away.</li><li>• The wheelchairs have to be easy to fix in case they break.</li><li>• The wheelchairs must provide grip and comfort for the user.</li></ul>

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d)	The benefits of using standard components are that they are readily available and can be easily changed. The drawbacks are that they are often expensive and can break easily when in use.
e)	Anthropometrics have influenced the design of these wheelchairs because it has insured that the wheelchairs are safe. - So Made Sure that there is no possible finger traps when using. - <del>The hand length</del> - The arm length must be able to reach the wheel in order to use the wheelchair. - The length of the users <del>feet</del> <sup>feet/legs</sup> must be able to reach.

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the footrests without any problems.  
• legs sized have been incorporated in the design of these wheelchairs because ~~the legs~~ must be able to reach ~~the~~ from the lower back down to the footrests. That size would have mattered.

2a) Vacuum forming is a suitable process for the production of food packaging because it provides efficient detail and many can be massed produced at the one time.

b) NB is a suitable thermoplastic. This thermoplastic is appropriate for the manufacture of food packaging because it is lightweight, water resistant and durable.

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2c)	Two considerations which would influence
	a production system is;
	<del>Two</del> The money that would be spent
	and how efficient the product will
	be.
3a)	The benefits of using CAD software
	in the design of these headphones
	is - you can easily change the
	sizes of the <del>part</del> product, if <sup>it</sup> doesn't look <sup>right</sup>
	• You can get a clear vision of
	what the product will look like.
	• You can use different <del>font</del> fonts/colours
	and see what will look best.
b)	The benefits of a strong brand
	name is more people are attracted
	to the products and will want
	to spend their money on there

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	Products also <del>they</del> will the brand
	will get more profit and will look
	better over other companies.
	c) You could come up with a logo
	and then you would post it back
	out to yourself and you wouldn't
	open the envelope. You would leave it
	untouched. This could protect your logo
	or your <del>stagen</del> saying for your
	company.
	d) Three stages of the product life
	cycle is birth <sup>life</sup> --- Death
	The first stage is birth when
	the product is first brought out
	in its early stages.
	The second stage is life when
	it <del>s</del> starts to get more popular.

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	as time goes on.
	The third stage is death when
	the product is old and a new product
	has come in place of <del>the old</del> it.
	And it has lost its value.
	Li) The Aesthetics of the razor are
	different.
	The <u>texture</u> is different the blue
	razor looks rough and the black/silver
	razor look smooth.
	The <u>shape</u> is different The blue
	razor looks more curved than the
	silver/black. The silver/black razor looks
	more flat and straight.
	The <u>colours</u> are different the
	blue razor is fully blue where as
	the silver/black razor has two colours
	which give off a contrast and



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	Overall make the razor look better.
	The <u>proportion</u> looks different as well
	the blue razor look very small
	Where as the black/silver razor
	looks very long in size.
	<del>b) Sketch model could be used to</del>
	<del>help the design of a product</del>
	<del>because you would be able to see</del>
	<del>the different size and how it would</del>
	<del>work.</del>
	A 3D Model could be used to
	help the design of a product
	because you can see the how well
	the product would go together.
	A Test model could have been
	used to test how well the
	product works, so you could put it
	to use, to try this out.

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5a)	The Purpose of a Product design
	Specification is to find out information
	on what the Product must include
	for example you might need to
	include the size 250-260mm in your
	Product, This information would be on
	the specification so that when you
	design this youve included relevant
	information.
	The Purpose of a technical Specification
	is so <del>is</del> you know what materials
	to use and how much it will cost.
b)	You could do a survey to carry
	out research into the needs of a
	target market. To help find out
	information.
	You could look at existing Products
	and try better them.

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c)	Manufacturers could Reduce negative environmental impact if they use environmental friendly materials, use materials that you can recycle. use materials that can be put to another use after its life cycle.
ba)	You could tell if materials rust -check Properties against materials.
b)	The Purpose of Ribs/webs is to provide extra support in models. Pins are used to help join parts together. Bosses are permanent joining methods.
c)	Two benefits of these symbols is that the consumer can clearly see what has been used.

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7)	graphics can be used effectively
	• You can change sizes at any time
	• You get a better visual of the
	Product.
	• You can change the material of
	the design. Products.
	• It's a fast process with very
	little cost.
	• helps give off a better understanding
	• Drawing would help you understand.